

What is claimed is:

1. A liquid crystal display device comprising:  
a liquid crystal panel having a plurality of scanning lines  
and a plurality of signal lines;  
5 a standard voltage generating circuit providing a plurality  
of standard voltages;  
a vertical driver that scans the scanning lines of said  
liquid crystal panel one after another;  
a horizontal driver that receives the plurality of standard  
10 voltages provided from said standard voltage generating circuit  
and supply gradation voltage to the signal lines of said liquid  
crystal panel; and  
a control circuit that creates gradation data by inverting  
a polarity of input data for each horizontal synchronization  
15 cycle and controls the horizontal drivers so as to apply standard  
voltage corresponding to said gradation data to the liquid  
crystal panel;  
wherein a gradation- $\gamma$  correction voltage relation used by  
said control circuit for gradation display is symmetrical with  
20 respect to a point in a center between a top gradation step and a  
bottom gradation step.
2. The liquid crystal display device according to claim 1,  
wherein said gradation- $\gamma$  correction voltage relation is  
represented with a straight line and said horizontal drivers  
25 apply  $\gamma$  correction voltage to said liquid crystal panel in  
response to the input gradation data to meet the relation.
3. The liquid crystal display device according to claim 1,  
wherein said gradation- $\gamma$  correction voltage relation is

represented with a non-straight line and said horizontal drivers apply  $\gamma$  correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

4. The liquid crystal display device according to claim 3,  
5 wherein said non-straight line is a curved line or a polygonal line.

5. The liquid crystal display device according to claim 1,  
wherein said input data is digital data and said control circuit creates polarity-inverted gradation data by inverting each bit in  
10 said digital data.

6. The liquid crystal display device according to claim 1,  
wherein said standard voltage generating circuit has a ladder resistance and said gradation- $\gamma$  correction voltage relation is determined by setting the resistance values of said ladder  
15 resistance.

7. A driving method of a liquid crystal display device comprising the steps of:

supplying a plurality of standard voltages to a horizontal driver of a liquid crystal panel; and  
20 scanning said liquid crystal panel with a vertical driver by inverting a polarity of input data for each line for displaying gradation;

wherein a gradation- $\gamma$  correction voltage relation used in displaying gradation is symmetrical with respect to a point in a  
25 center between a top gradation step and a bottom gradation step.

8. The driving method of a liquid crystal display device according to claim 7, wherein said gradation- $\gamma$  correction voltage relation is represented with a straight line and said horizontal

drivers apply  $\gamma$  correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

9. The driving method of a liquid crystal display device according to claim 7, wherein said gradation- $\gamma$  correction voltage  
5 relation is represented with a non-straight line and said horizontal drivers apply  $\gamma$  correction voltage to said liquid crystal panel in response to the input gradation data to meet the relation.

10. The driving method of a liquid crystal display device  
10 according to claim 9, wherein said non-straight line is a curved line or a polygonal line.

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